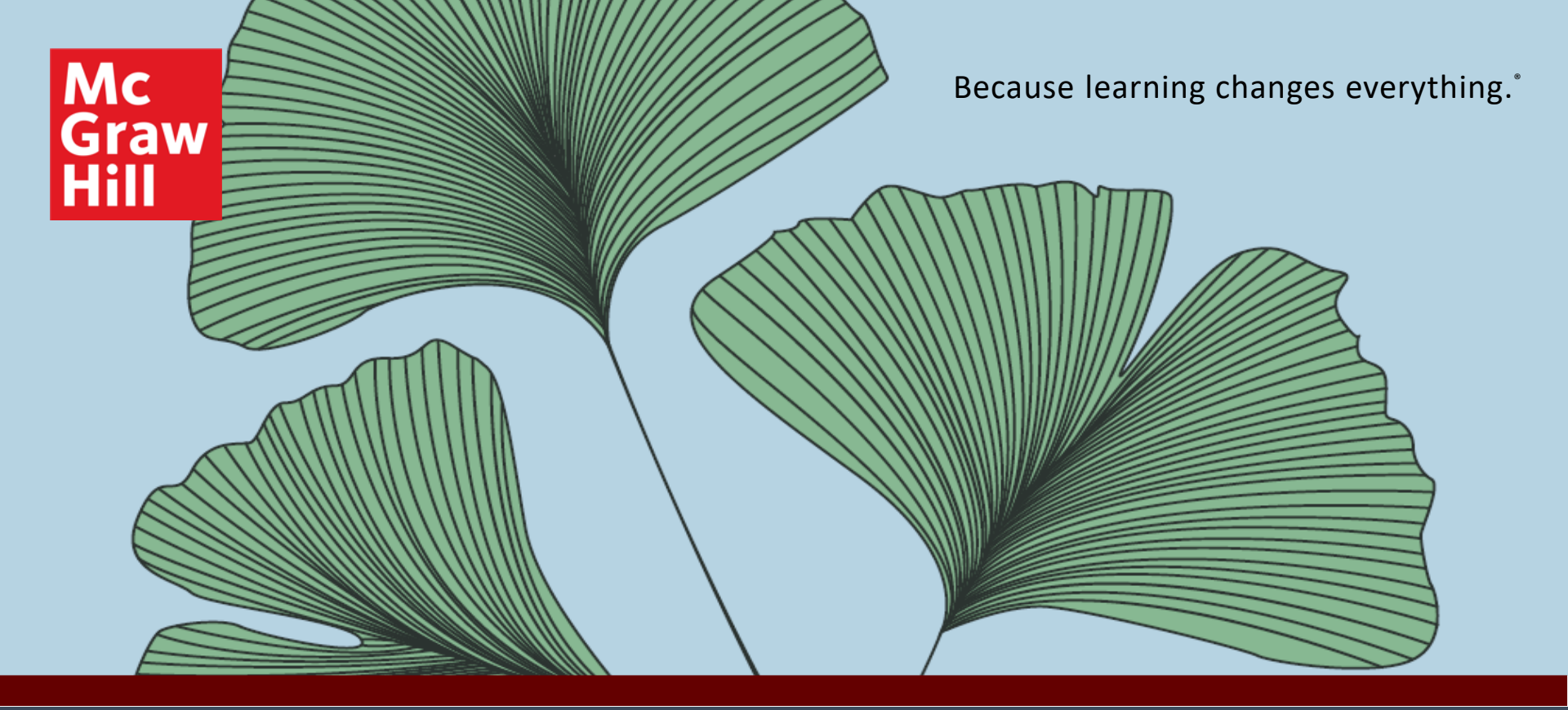

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Chapter 6

The Labor Market: Workers, Wages, and Unemployment

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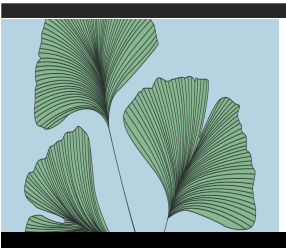

Learning Objectives

1. Discuss five important trends that have characterized labor markets in the industrialized world in the past few decades.
2. Apply a supply and demand model to understand the labor market.
3. Explain how changes in the supply of and demand for labor account for trends in real wages and employment in the past few decades.
4. Differentiate among the three types of unemployment defined by economists and the costs associated with each.

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Trend 1

- Industrialized countries have enjoyed real wage growth in the 20th century.

2018

- U.S. real earnings are about twice real earnings in 1960.

2018

- U.S. real earnings are more than five times real earnings in 1929.

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Trend 2

The rate of real wage growth has stagnated since 1973.

- Fastest during the 1960s and early 1970s.

The number of people with jobs and the percent of the population employed has substantially increased.

Data on real wage growth:

- 1960 – 1973 2.5% per year.
- 1973 – 1995 0.9% per year.
- 1996 – 2007 1.8% per year.
- 2007 – 2016 0.7% per year.
- 1970 – 2012 1.1% per year.

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Trend 3

Increased wage inequality in U.S.

Between 1970s and 2018.

- Average real weekly earnings of workers at the low end of the income distribution decreased.
- Best-educated, highest-skilled workers' real wages increased.

Income with an advanced college degree is.

- Twice the income of a high school graduate.
- Three times the income of a worker who did not graduate from high school.

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Trend 4

- The number of people with jobs has grown substantially in the past 50 years.
- Rate of job growth has slowed recently.
- In 1970, about 57% of people over 16 had jobs, by 2000 this was 64%, 61% in 2019.
- Number of jobs grew 1980-2000 by 38%; number of people grew by only 27%.

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Trend 5

- Western Europe has suffered higher unemployment than the U.S..
- Unemployment in France, Italy, and Spain from 1990-2018 was 9.9, 9.6, and 16.6% vs. 5.9% in the U.S..
- Similar problems in many other Western European countries.

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The Labor Market

Supply and demand analysis can be used to find the price of labor (real wages) and the quantity (employment).

- Analysis will consider the number of workers employed, not work-hours per year.

Labor market is an input market.

- Firms buy labor to produce goods and services.

Macroeconomics looks at aggregate levels of employment and real wages.

- Microeconomics looks at wage determination for a category of workers.

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Wages and Demand for Labor

The demand for labor depends upon:

- The productivity of workers.
  - Greater productivity increases employment.
- The price of the worker's output.
  - A higher real price increases employment.

Diminishing returns to labor.

- Assumes non-labor inputs are held constant.
- Adding one worker increases output but by less than the previous worker added.

Value of Marginal Product (VMP) is extra revenue that an added worker generates.

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Banana Computer Company (BCC)

BCC can sell all its computers for $3,000 each

Number of Workers	Computers per Year	Marginal Product
1	25	25
2	48	23
3	69	21
4	88	19
5	105	17
6	120	15
7	133	13
8	144	11

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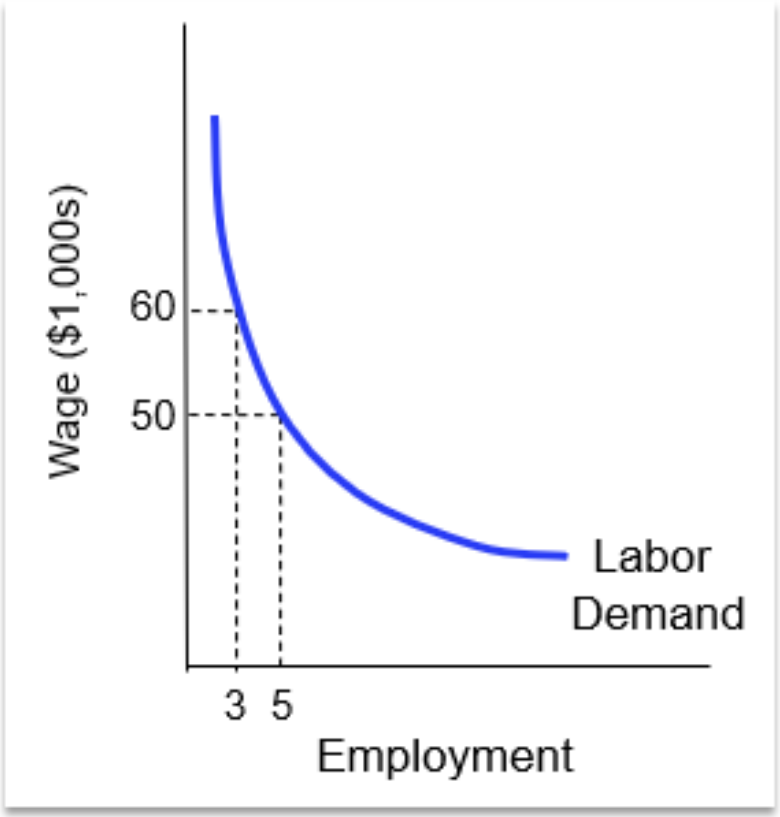
Demand Curve for Labor

Hire an extra worker if and only if the VMP exceeds the wage paid.

If wage is $60,000, BCC will hire 3 workers.

- At $50,000, BCC hires 5 workers.

The lower the wage, the more workers employed.



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Shifting Demand for Labor

Demand shifts when the value of the marginal product of a worker changes.

Two factors determine the demand (*VMP*) for labor.

- The price of the company's output.
  - An increase in market demand.
- The productivity of the workers.
  - Greater quantity of non-labor inputs.
  - Organizational change.
  - Training and education.

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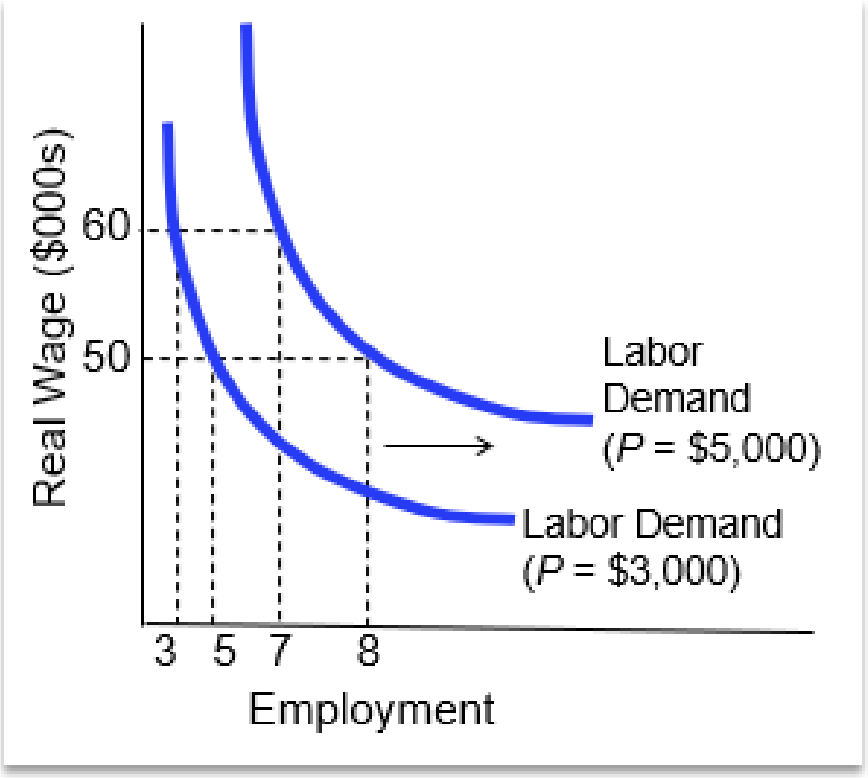
Price of Output Increases

If the price of computers increases, demand for labor shifts to the right.

- There is a separate demand for labor curve for each possible output price.

An increase in the price of workers' output increases the demand for labor.



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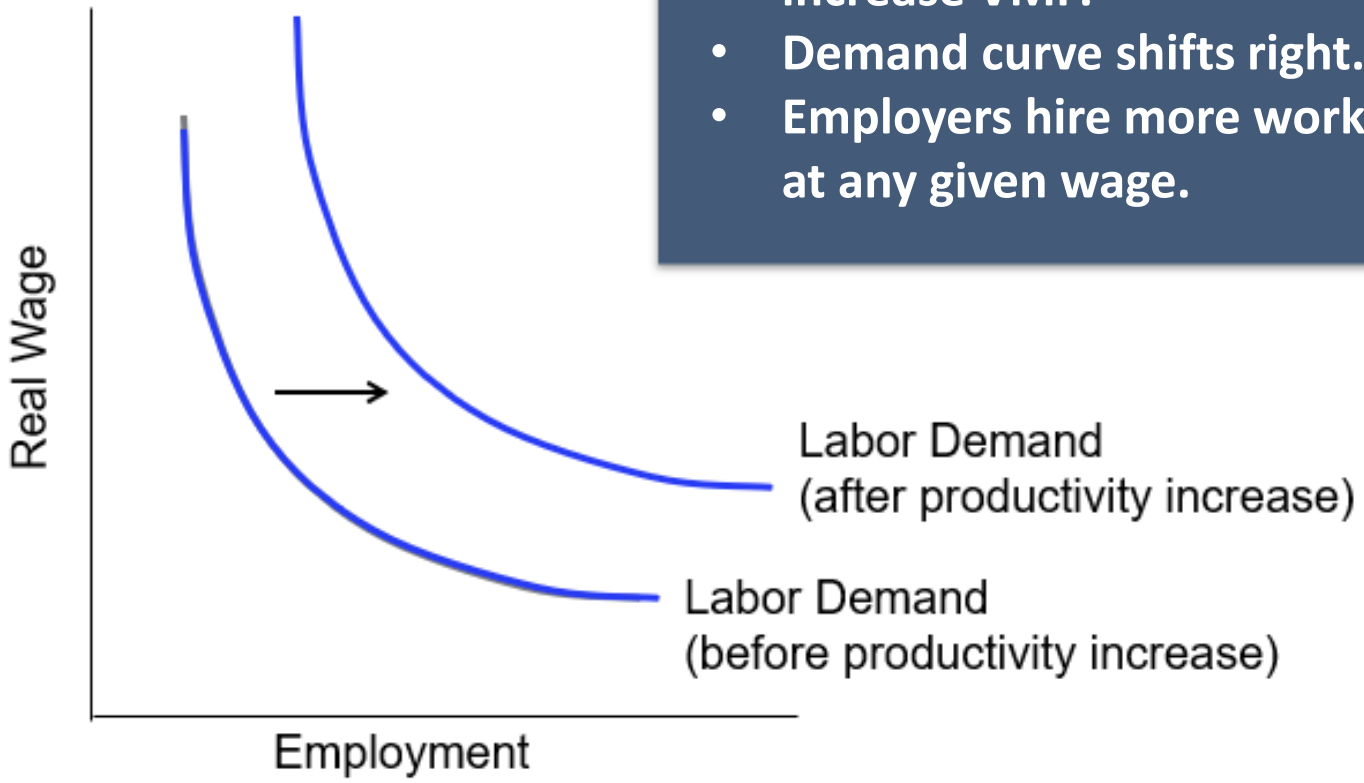
Higher Productivity

- Increases in productivity increase VMP.
- Demand curve shifts right.
- Employers hire more workers at any given wage.



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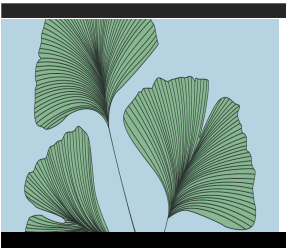

Individual Labor Supply

Reservation wage is the lowest wage a worker would accept for a given job.

- Opportunity cost of working is your leisure activity.
- Work compensates you for lost leisure.
  - If working conditions are unpleasant or dangerous, a premium for that would be included in the wage.
- *Cost-Benefit Principle* at work.

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Aggregate Labor Supply

Macroeconomic determinants of labor supply.

- Size of the working age population.
  - Domestic birthrate.
  - Immigration and emigration.
  - Ages when people enter and retire from the workforce.
- Share of working-age population willing to work.

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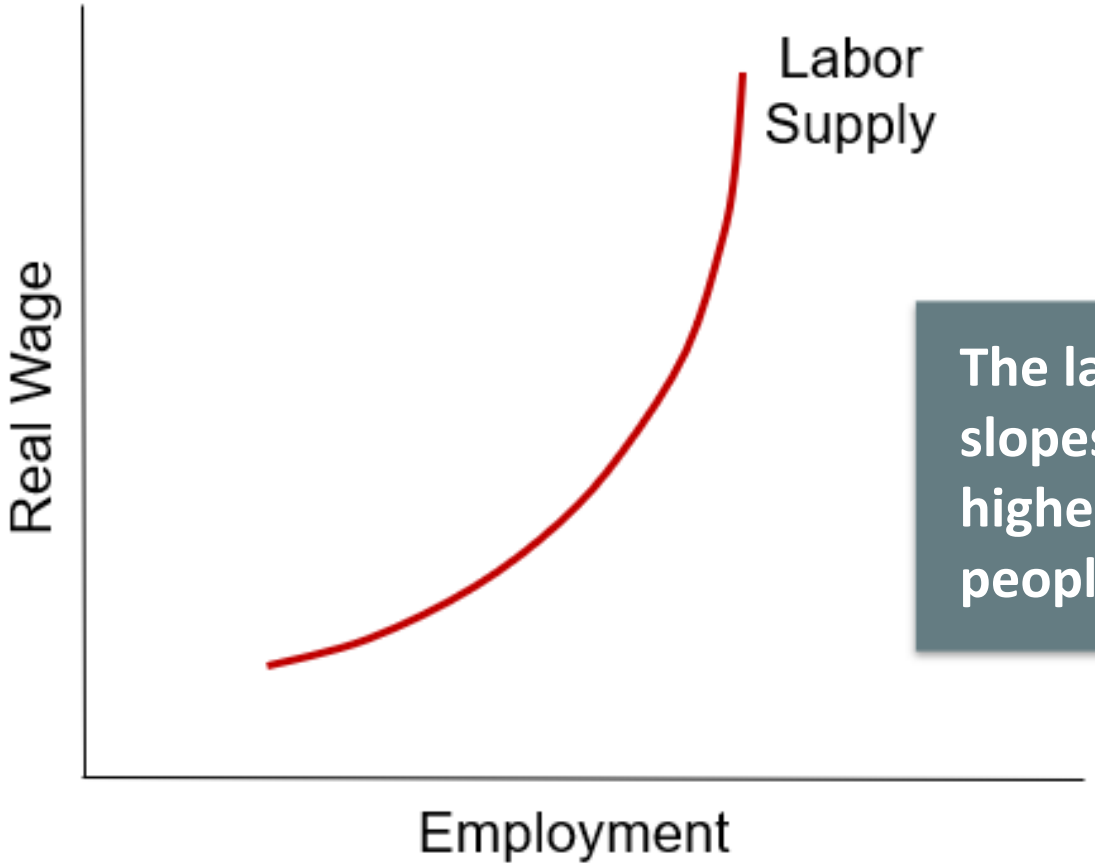
The Supply of Labor



The labor supply curve slopes up because at a higher real wage, more people are willing to work

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Shifts in Labor Supply

A shift in labor supply is caused by any change in the number of workers willing to work at each wage.

- Increase in the working-age population.
- Increase in the share of working-age population willing to work.

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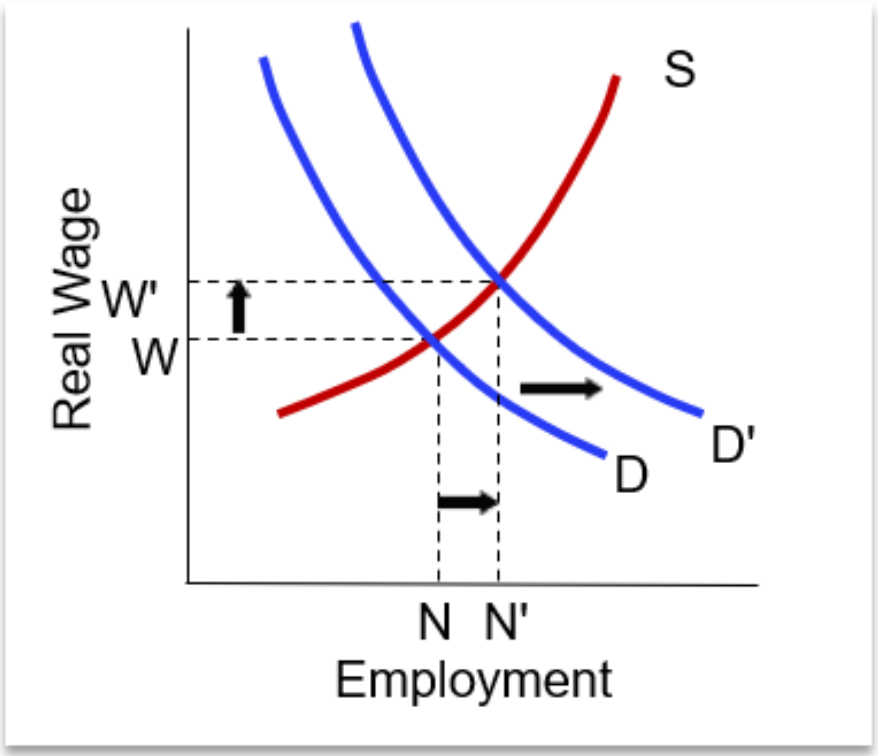
Trend 1: Increasing Real Wages

Industrialized countries have had sustained growth in productivity in the 20th century.

- Increases demand for labor.
- Both real wages and employment increased.

Productivity increases were due to.

- Technological progress.
- Increases in capital.



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Trend 2: Stagnated Wage Growth Since 1970 [1]

Stagnated growth in real wages could be either.

- Slower growth in demand for labor OR.
- Faster growth in the supply of labor.

Productivity growth and real wages move together.

	Average Growth Rate (%)	
	Productivity	Real Earnings
1970 – 1980	0.8%	0.6%
1980 – 1990	1.5	1.3
1990 – 2000	2.0	2.2
2000 – 2010	1.6	0.8
2010 – 2018	0.8	0.9

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Trend 2: Stagnated Wage Growth Since 1970 2

Slower demand growth explains slower wage growth.

- Does not explain rapid growth in employment.

Supply of labor must have increased as well.

- Increased participation by women.
- Baby Boom.
- High rates of immigration.

Looking forward.

- Labor supply growth will slow.
- Partly depends on whether productivity growth continues to decline.

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Trend 3: Increased Wage Inequality in U.S. [1]

Globalization results in an expansion of many markets to worldwide supply.

- Increasing ease of goods and services crossing national borders.

Benefit of globalization is increased specialization and efficiency.

- *Principle of Comparative Advantage.*

Globalization also means that some goods produced domestically are no longer competitive.

- Some domestic sectors shrink.

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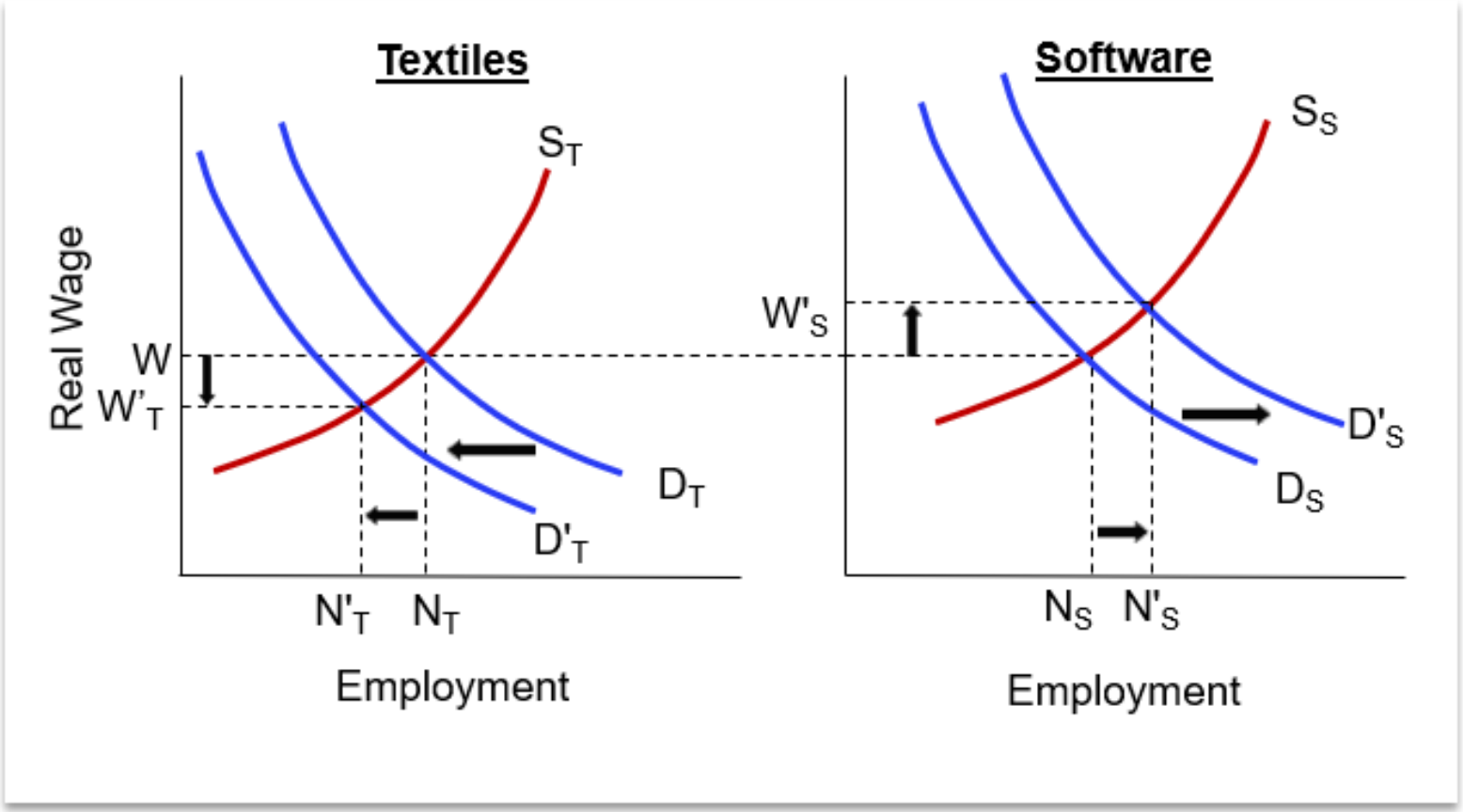
Trend 3: Increased Wage Inequality in U.S. 2



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Trend 3: Increased Wage Inequality in U.S. 3

When wages in importing industries fall and wages in exporting industries rise, wage inequality increases.

- Low-skill industries in the U.S. face the toughest international competition.
- Political resistance to free trade grows.

Worker mobility is the movement of workers between jobs, firms, and industries.

- Market incentives move workers out of textiles and into software.
- Transition aid by government can assist workers to make the change.

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Trend 3: Increased Wage Inequality in U.S. 4

Technological change can be a source of increasing wage inequality.

- Occurs if technical change favors higher-skilled or better-educated workers.

Some innovation renders old skills less valuable.

- Addition and the calculator and computer.

Skill-biased technological change affects the marginal products of higher skilled workers differently from those of lower-skilled workers.

- Recent changes favor higher skilled workers.
- Automobile production lines increasingly use robots.
- You need workers who can program the robots, not workers who can run the line.

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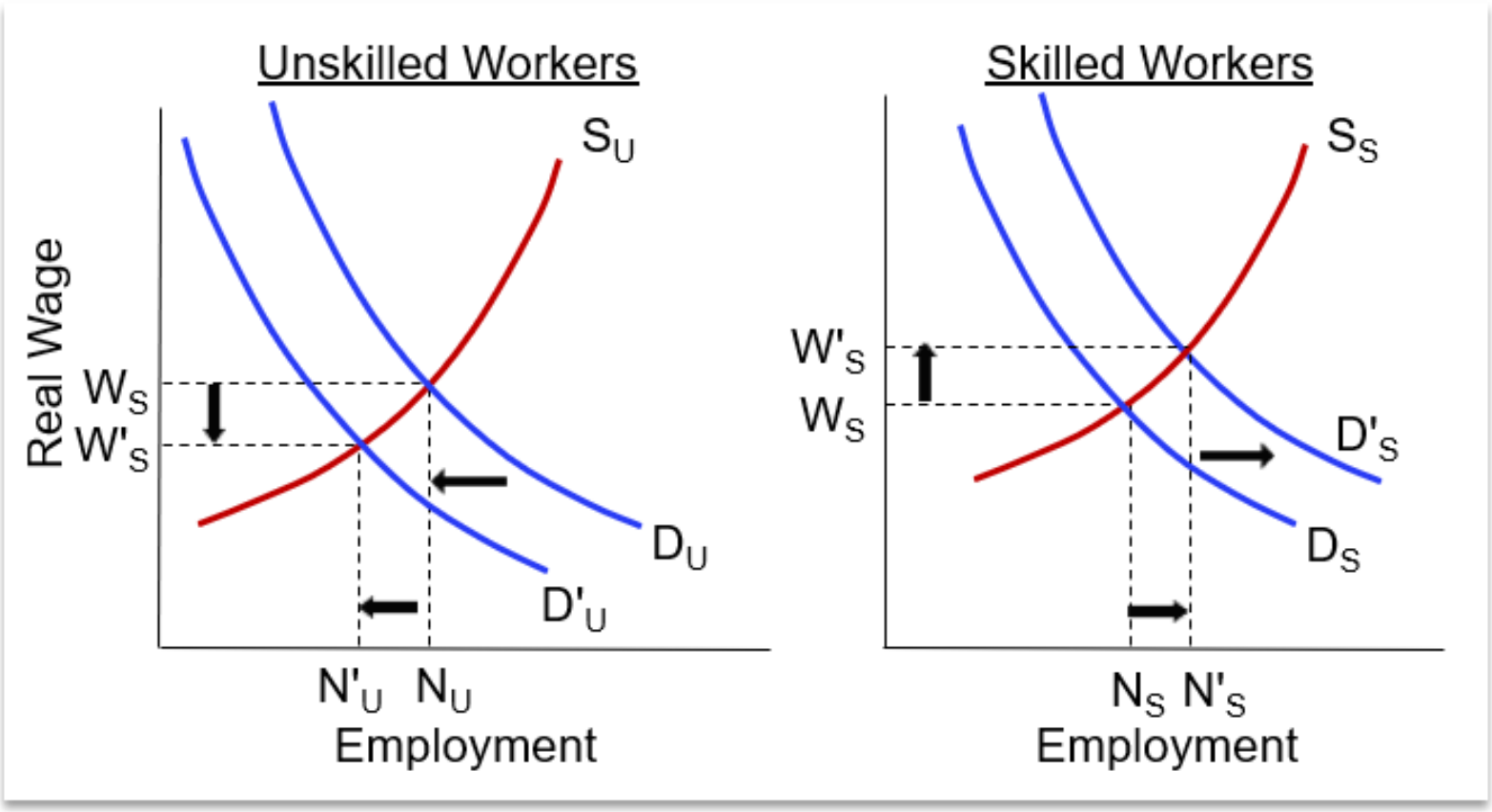
Skill-Biased Technological Change



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Types of Unemployment 1

Frictional unemployment occurs when workers are between jobs.

- Short duration, low economic cost.
- May increase economic efficiency.

Cyclical unemployment is the increase in unemployment during economic slow-downs.

- Usually short duration.
- Economic cost is the decline in real GDP.

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Types of Unemployment 2

Structural unemployment is long-term, chronic unemployment in a well-functioning economy.

- Lack of skills, language barriers, or discrimination.
- Structural shifts in production create a long-term mismatch between workers and market needs.
- Barriers to employment such as.
  - Minimum wages.
  - Unions.
  - Unemployment Insurance.
- High economic, psychological, and social costs.
- Example: U.S. steel, telecommunications manufacturing.

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Structural Barriers to Employment

Unemployment insurance is a government transfer to unemployed workers.

- Helps to reduce the costs of unemployment.
- May give the unemployed an incentive to search longer and less intensely.

To work efficiently, unemployment benefits should be.

- For a limited time.
- Less than the income received when working.

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Other Government Regulations

Health and safety regulations can reduce the demand for labor by.

- Increasing employer costs.
- Reducing productivity.

The reduction in demand will increase unemployment and lower wages.

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Impediments to Full Employment

Many of these impediments can explain the differences in the employment rate between the U.S. and western Europe.

European labor markets are highly regulated.

- High minimum wage.
- Little flexibility in benefits.
- More powerful unions.

This, combined with globalization and skill-biased technological change, has reduced employment in Europe.

- Many workers aren't worth employing in the modern world, given these regulations.

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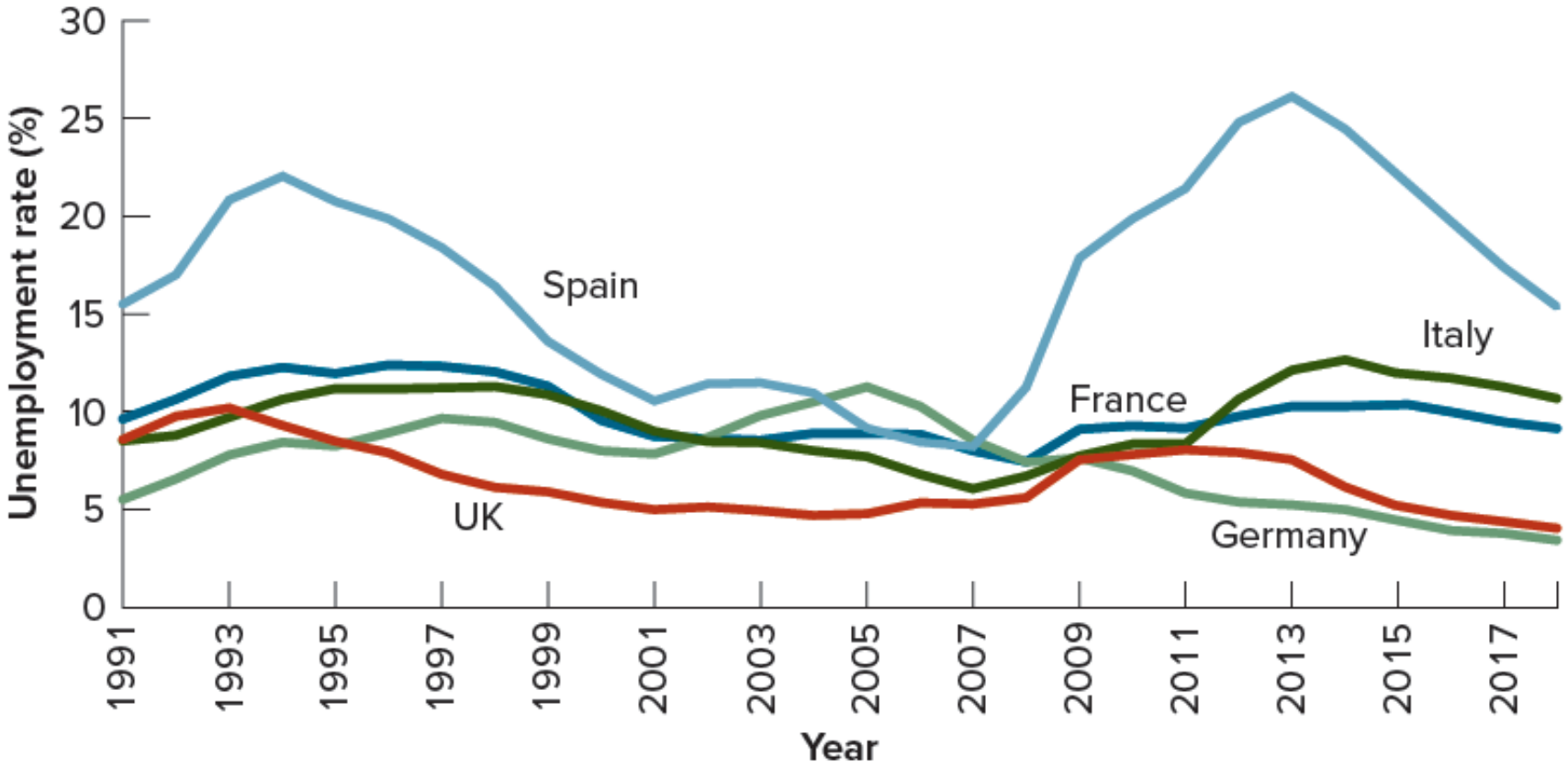
Unemployment in Western Europe, 1991-2018



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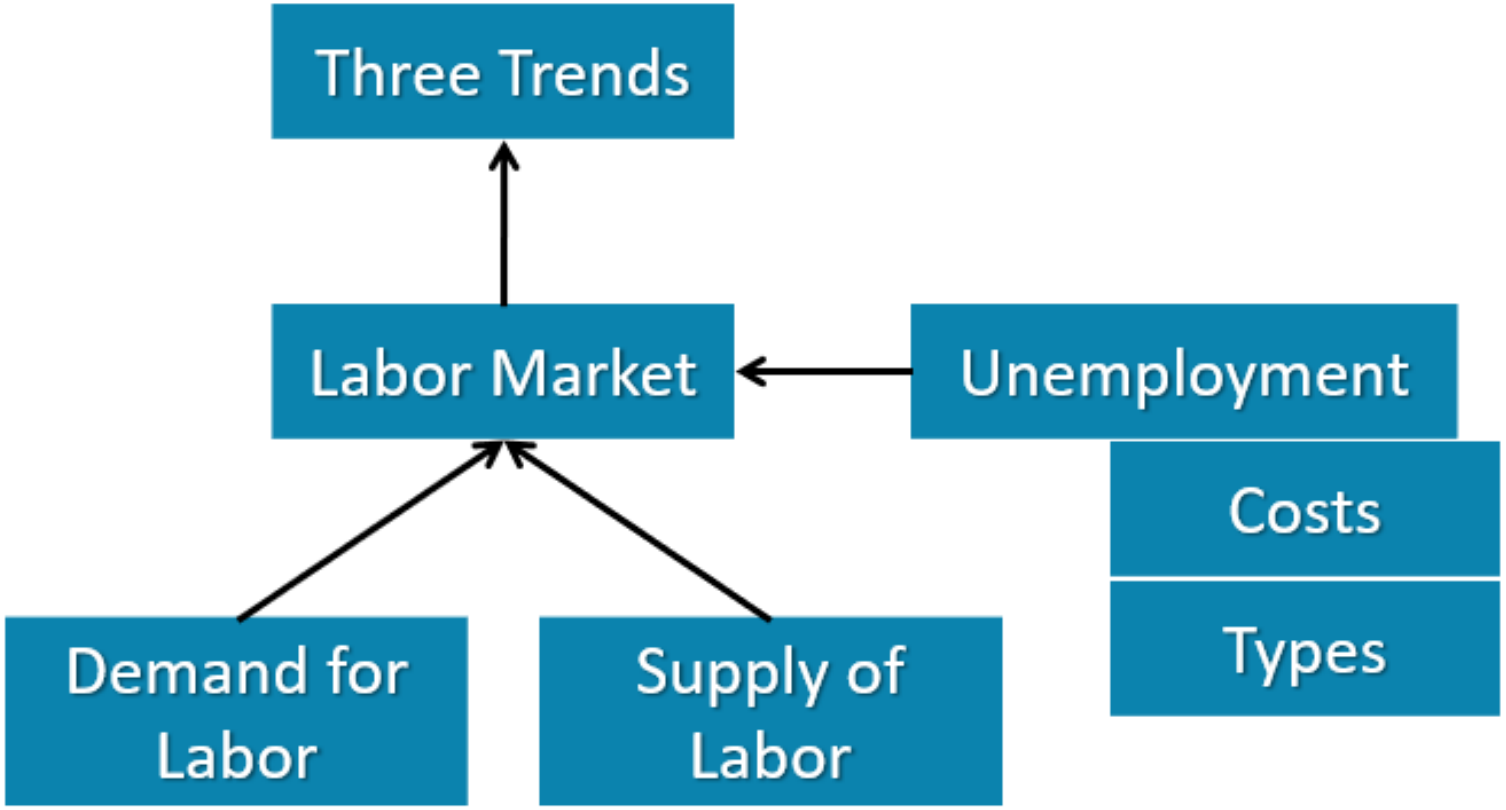
Wages and Unemployment



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